### Application of South Carolina Electric & Gas Company for approval of an increase in its retail electric rates and charges.

Docket No. 2002-223-E

Testimony of

James E. Spearman, Ph.D.

Research Department

Public Service Commission of South Carolina

1	Q	Please state for the record your name, business address and position with the
2		South Carolina Public Service Commission.
3	A	My name is James Spearman. My business address is 101 Executive
4		Center Drive, Columbia, SC. I am employed by the Public Service Commission of
5		South Carolina as the Research & Planning Administrator.
6	Q	Please summarize your educational background and professional experience.
7	A	I graduated from the Pennsylvania State University with a Bachelor of
8		Science in Mineral Economics and from the Darden School of the University of
9		Virginia with a Master of Business Administration. I received a Doctor of
10		Philosophy in Resource Economics from West Virginia University with
11		specialization areas in Regional Economics and Trade and Development.
12		My professional experience includes being a faculty member at the
13		University of South Carolina-Lancaster and Erskine College where I taught a
14		variety of economics and business courses. I also taught economics courses as an
15		adjunct professor in the Graduate Business Program of Morehead State University.
16		My experience also includes employment as an Economist at the Federal Highway
17		Administration, as a consultant at Foster Associates, Inc., and as a Senior
18		Economist at Ashland, Inc. I joined the Research Department of the Public Service
19		Commission in October of 1990.
20	Q	What is the purpose of your testimony?
21	A	The purpose of this testimony is to estimate and recommend a return on
22		equity that South Carolina Electric & Gas Company (SCE&G) could reasonably

1		expect to earn on its regulated electric operations and its corresponding cost of
2		capital (return-on-ratebase).
3	Q	Please tell us about the operations of South Carolina Electric & Gas
4		Company.
5	A	On December 31, 1984, South Carolina Electric & Gas Company
6		(SCE&G) became a wholly-owned subsidiary of SCANA Corporation. SCE&G is
7		the principal subsidiary of SCANA. In 2001, SCE&G contributed nearly 40% of
8		SCANA's operating revenues, over 98% of SCANA's net income, and over 64% of
9		SCANA's total assets. SCANA derived over 58% of its total capitalization from
10		SCE&G in 2001.
11		SCE&G is engaged in the generation, transmission, distribution and sale of
12		electricity in central and southern South Carolina. It serves approximately 550,000
13		electric customers in a service territory extending into 24 counties covering more
14		than 15,000 square miles. SCE&G also has a retail gas operation serving over
15		267,000 customers in South Carolina.
16	Q	What methodology was used to develop a return on equity estimate?
17	A	The Discounted Cash Flow (DCF), the Capital Asset Pricing Model
18		(CAPM), and Risk Premium analyses are used to estimate the cost of equity
19		appropriate for SCE&G. These models have been widely used and accepted in rate-
20		making proceedings, are well documented in finance literature, and conform to the
21		requirements of the <u>Hope</u> and <u>Bluefield</u> cases.

	Unfortunately, these models cannot be applied directly to SCE&G. The
	DCF analysis requires a dividend yield, and the CAPM analysis requires a beta. To
	develop the dividend yield and beta requires a market value for a company's stock.
	Since SCANA Corporation owns all of SCE&G's common stock and does not trade
	it on the open market, there is no market value for SCE&G stock. Therefore, a
	proxy must be chosen for SCE&G.
Q	What companies were selected as a proxy for South Carolina Electric and Gas
	Company?
A	The electric companies in Moody's Electric Utility Index, excluding
	Edison International, PG&E Corporation, and Reliant Energy were selected as a
	proxy for SCE&G. Edison International and PG&E Corporation were excluded
	because of their very poor financial condition. Also, the turmoil in the California
	electric market would not provide reasonable basis on which investors would make
	decisions concerning companies that have little or no ties to California. Reliant
	Energy recently split into two companies: CenterPoint Energy has the regulated
	businesses such as electricity transmission and gas distribution, Reliant Resources
	has the deregulated operations such as retail electric sales, electric generation, and
	energy trading and marketing. Neither CenterPoint Energy nor Reliant Resources is
	engaged in the State regulated electricity business.

Duke Energy, Progress Energy, and SCANA Corporation are also included for comparison purposes, but are not included in the comparison group of companies. Since these companies or some of their subsidiaries are regulated by

1		this Commission, their inclusion in the comparison group could cause bias and
2		circularity.
3	Q	How do these proxy companies compare to South Carolina Electric & Gas
4		Company?
5	A	Exhibit (JES-1) shows 2001 financial data for the proxy group of electric
6		companies. On average, the sample group of companies is larger than either
7		SCE&G or SCANA Corporation as measured by total revenues, net income, and
8		market capitalization. However, of the 17 companies in the sample group, 9 have a
9		market capitalization equal to or less than SCANA Corporation. Based on market
10		capitalization, the sample group average and SCANA Corporation represent midcap
11		companies.
12		SCE&G's return on shareholder equity of 13.0% is nearly identical to the
13		comparison group average of 13.1%. Only two companies in the comparison group
14		have dividend payout ratios exceeding the 69.81% dividend payout ratio of
15		SCE&G. All dividends paid by SCE&G are paid to its parent, SCANA Corporation.
16		Stockholders receive dividend payments from SCANA Corporation which had a
17		55.81% dividend payout ratio in 2001 compared to an average dividend payout ratio
18		of 59.14% for the comparison group.
19		Financial ratings for the proxy companies are shown in Exhibit (JES-2).
20		Stock ratings, as reported by Standard & Poor's, range from a low of "B" to a high
21		"A-". SCANA Corporation has a stock rating of "B+" which is in the middle of the
22		range. The Standard & Poor's bond ratings range from a low of "BBB-" to a high of

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"A+". All the companies are investment grade having bond ratings of "BBB-" or
higher. Xcel Energy will drop to "junk bond" status with a one-grade down rating.
Both SCE&G and SCANA Corporation have a bond rating of "A-" which is near
the upper end of the range. Value Line rates these companies fairly high with a
financial strength rating ranging from a low of "B" to a high of "A++". SCANA
Corporation has a financial strength rating of "A" which is in the upper end of the
range. These companies, with the exception of Xcel, are considered to be
moderately to highly safe investments based on the Value Line safety ratings of
between "1" and "3". SCANA Corporation has a safety rating of "2". However,
Value Line does not consider any of these companies, including SCANA
Corporation, to be timely investments based in its timeliness ratings of "3" or
below. The current turmoil in the electric industry probably accounts for the low
timeliness ratings.
Based on the Discounted Cash Flow (DCF) method, what is your estimate of
the cost of equity for South Carolina Electric & Gas Company?

The DCF methodology requires two components, a dividend yield and an expected growth rate. For investors as a whole, the market value of common stock is equal to the present value of the expected stream of future dividends. Therefore, one must know the current dividend yield and its expected growth in order to utilize the basic annual DCF model:

$$\mathbf{R}_{\mathrm{e}} = (\mathbf{D}_{1}/\mathbf{P}_{\mathrm{o}}) + \mathbf{G}$$

Where  $R_e$  = return on equity

1	$D_1 = next annual dividend$
2	$P_0$ = current market price of common stock
3	G = growth rate.
4	Neither the dividend yield (D <sub>1</sub> /P <sub>0</sub> ) nor the expected growth rate (G) can be observed
5	directly for SCE&G because SCE&G stock is not publicly traded, thus, there is no
6	market price for SCE&G common stock. Also, there are no published forecasts of
7	either a dividend growth rate or an earnings growth rate for SCE&G.
8	Assuming the market is efficient, the current dividend yield should reflect
9	the best judgment of investors concerning the value of a stock. In essence, this
10	assumption means that the current dividend $(D_0)$ and the current market price $(P_0)$
11	reflect the best estimates of the future of the company at the present time. This also
12	allows for the current dividend $(D_0)$ to be substituted for the next dividend $(D_1)$
13	when utilizing the DCF model.
14	Exhibit (JES-3) shows the dividend yields for each comparison company
15	based on the October 22, 2002, dividend, the July-September 2002, end-of-month
16	average closing stock price, and the October 22, 2002, closing stock price. The
17	average dividend yield based on the July-September 2002, end-of-month average
18	price is 4.90% compared to an average dividend yield of 5.43% when using the
19	October 22, 2002, stock price. Dividend yields vary for the individual companies
20	from a low of 1.81% to a high of 10.96%.
21	Projected growth rates for the comparison companies are shown in Exhibit
22	(JES-4). Both dividend growth and earnings growth have been utilized in this

analysis. Although the DCF model is predicated on dividend growth, there is disagreement concerning whether dividend growth rates or earnings growth rates are reflective of investor expectations. Over the long term, dividends cannot grow faster than earnings. Thus, earnings growth will place an upper limit on dividend growth and return-on-equity expectations in the long run. Dividend growth will place a floor on return-on-equity expectations.

Three public sources of growth forecasts have been utilized. The <u>Value Line Investment Survey</u> is widely distributed and readily available to many investors either by subscription or at libraries. Quicken forecasts are provided by Zacks and are a composite of the forecasts of many analysts. It is available at no cost to anyone having access to the Internet. Growth forecasts published by Zacks can also be found in libraries. Standard & Poor's earnings growth forecasts can be found in the Standard & Poor's Earnings Guide which is available in libraries.

Ideally, a very long-term growth is desired since the theoretical DCF model values stock over its lifetime, and utility stocks have historically been considered safe income stocks which investors tended to hold for long periods. However, investors usually do not have published sources for very long-term forecasts and often buy and sell stocks over a period of a few years. The holding periods for utility stocks may also shorten as the industry restructures. Therefore, it is not unreasonable to expect that investors would rely on five-year growth forecasts when evaluating a stock.

Adjustments are made to the dividend forecasts to eliminate negative forecasts and zero growth forecasts. Investors will not invest in companies having long-term negative or zero growth. Thus, the companies having negative or zero projected growth rates are excluded. When the negative and zero growth rates are excluded, the average dividend growth increases from 2.0% to 3.4%. Average Value Line earnings growth forecasts increase from 3.9% to 5.3%. Since all Quicken (Zacks) and Standard & Poor's growth forecasts are above zero, no adjustment is necessary. The average earning growth rate reported by Quicken (Zacks) is 5.5%, and the average earnings growth reported by Standard & Poor's is 6.5%.

The expected return-on-equity estimates based on the annual Discounted Cash Flow model are shown in Exhibit (JES-5). Average estimated expected return on equity ranged from 8.32% to 8.89% using dividend per share growth and 10.61% to 12.51% using earnings per share growth. For individual companies, the return on equity estimates ranged from 4.61% to 20.76% using dividend growth and from 5.97% to 18.73% using earnings growth. Expected returns for SCANA Corporation ranged from 9.37% to 9.40% using dividend growth and from 9.58% to 13.07% using earnings growth.

Since dividends are paid quarterly, some investors consider the annual DCF model to understate the actual dividend yield if the dividend is increased during any of the four quarters comprising the annual model. Many analysts will use a quarterly DCF model instead of, or in addition to, the annual model. I have utilized

the most liberal form of quarterly model in addition to the annual model. The quarterly model that I utilized, shown below, has dividends increasing quarterly instead of only once during the year. Such quarterly compounding will actually overstate the expected return.

$$K_e = [d_q(1+g)^{0.25}/P_o + (1+g)^{0.25}]^4 - 1$$

Where:  $K_e$  = return on equity

 $d_q$  = current quarterly dividend

g = annual growth rate

 $P_o$  = current market price

Exhibit (JES-6) shows the expected return-on-equity using the quarterly DCF model. The return-on-equity average for the comparison group ranges between 8.41% and 9.01% when using dividend growth. For the individual companies, the range is from 4.65% to 20.83%. Expected return-on-equity for SCANA Corporation ranges between 9.46% and 9.49%. The average return-on-equity ranges from 10.72% to 12.65% based on earnings growth. For the individual companies, the range is from 6.04% to 19.21%. SCANA Corporation's expected return-on-equity ranges from 9.67% to 13.15%.

- Q Based on the Capital Asset Pricing Model (CAPM), what is your estimate of the cost of equity for South Carolina Electric & Gas Company?
- A The CAPM is a comparable earnings approach where all of the nondiversifiable (systematic) market risk of a firm which impacts the risk premium is determined relative to the entire market through the beta coefficient. It establishes

rate of return estimates in conjunction with the risk-return relationship of the entire market. The return estimates derived through the CAPM are equal to the opportunity costs of an investment in a particular firm and, therefore, are the returns investors would expect from investment in a firm of comparable risk.

Although there is universal agreement among analysts concerning the components of the Capital Asset Pricing Model, shown below, there is some disagreement concerning the actual measure of each component.

$$R_e = B(R_m - R_f) + R_f$$

Where:  $R_e$  = return on equity

B = beta coefficient

 $R_m$  = market rate of return

 $R_f = risk$ -free rate of return

Theoretically, the beta coefficient (B), the market rate of return ( $R_m$ ), and the risk-free rate of return ( $R_f$ ) should reflect values expected over the life of the investment. Investors must rely on historical data and their best estimates of future conditions to determine the value of the components of the CAPM.

Exhibit (JES-7) shows the betas for the past sixty-month period for the comparison companies as reported by Value Line. Value Line betas are based on the New York Stock Exchange Composite Index and are rounded to 0.00 or 0.05. Although these betas are not technically forecasts of future betas, they are related to future expectations. Since investors make decisions based on future expectations, the historical betas reflect the response of the market to the future expectations of

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the investors during the previous sixty months. The average value of the Value Line betas for the comparison companies is 0.62 with a range from 0.55 to 0.75. SCANA Corporation has a beta of 0.55. Given that the market as a whole has a beta of 1.00, the values of the electric company betas indicate that the nondiversifiable risk faced by these companies is less than that of the market.

Determining the appropriate rate of return for the market may be the most challenging component of the CAPM. According to Ibbotson Associates, in Stocks, Bonds, Bills, and Inflation 2002 Yearbook, the geometric mean total annual return on large company stocks was 10.7% for the period 1926-2001. The corresponding arithmetic mean return was 12.7%. The Research Department of the Public Service Commission has calculated an 11.45% geometric mean total return for the Standard & Poor's 500 Index for the period 1972-2001 and a 13.37% arithmetic mean annual return. The arithmetic mean annual return for the period 1972-2001 based on Ibbotson data was 13.58%. Over the past 10 years, the growth in the Standard & Poor's 500 Index has been slightly higher than in the past. The geometric mean annual return for the 1992-2001 period was 12.23% with an arithmetic mean of 13.99%. For the five-year period 1997-2001, the Standard & Poor's 500 Index had a geometric mean annual return of 10.51% with an arithmetic mean annual return of 12.30%. The decline in the return of the Standard & Poor's 500 Index during the 1997-2001 period primarily reflects the depressed economy in 2000 and 2001. Market returns, whether based on Ibbotson data or the Research Department's analysis of Standard & Poor's 500 Index, are fairly consistent over each time

period. Geometric mean annual returns ranged from 10.51% to 12.23%. Arithmetic mean annual returns ranged from 12.30% to 13.99%. I have used a market return ranging from 10.50% to 14.00% in my CAPM analyses.

U.S. government securities are generally considered to be the best proxy for the risk-free rate of return. Given the taxing power of the Federal government, there is minimal risk of default on these securities. Many U.S. government securities are subject to inflation risk. However, the federal government does offer inflation-adjusted long-term savings bonds. Exhibit (JES-8) shows the yields on U.S. government securities as of October 22, 2002 and an end-of-month average for the July-September 2002 period. Historically, the 30-year Treasury Bond was considered the benchmark. The federal government's aggressive effort to shrink its long-term debt in 2000 reduced the supply of 30-year bonds available, and the 10-year Treasury Bond replaced the 30-year bond as the benchmark. Yields on 30-year Treasury Bonds ranged from 4.970% for the July-September period to 5.162% on October 22, 2002. Yields on 10-year Treasury Bonds ranged from 4.064% for the July-September period to 4.261% on October 22, 2002. I have used the range of 4.064% to 5.162% for the risk-free rate in my CAPM analyses.

Exhibit (JES-9) shows the results of the Capital Asset Pricing Model analyses using the low and high values of the expected range of market returns and Treasury Bond yields. At a market return of 10.50% and a risk-free rate of 4.064%, the average expected return-on-equity for the proxy companies is 8.06%. For the individual companies, the range is from 7.60% to 8.89%. The expected return-on-

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5	Q	Based on the Risk Premium analysis, what is your estimate of the cost of equity
4		SCANA Corporation has an expected return-on-equity of 10.02%.
3		returns-on-equity for the individual companies range from 10.02% to 11.79%.
2		free rate of 5.162%, the expected average return-on-equity is 10.61%. Expected
1		equity for SCANA Corporation is 7.60%. At a market return of 14.0% and a risk-

### Based on the Risk Premium analysis, what is your estimate of the cost of equity for South Carolina Electric & Gas Company?

The Risk Premium model is based on the theory that common stockholders require a premium above the cost of debt to compensate them for the added risk of being subordinate to debt holders on claims on a company's earnings or assets. I have determined the risk premium based on the yields on long-term government bonds. These yields are easily available to the public.

Exhibit (JES-10) shows the risk premiums using 1926-2001 market returns and long-term government bond yields as reported by Ibbotson Associates in Stocks, Bonds, Bills, and Inflation 2002 Yearbook and 1972-2001 market returns of the Standard & Poor's Utility Index and long-term government bond yields as calculated by the Research Department from Standard & Poor's Statistical Service. The equity risk premiums based on the total return on company stocks reported by Ibbotson must be adjusted to reflect the fact that the electricity companies have less risk than the market. I used the average beta of the proxy companies to make this adjustment. No adjustment was made to the equity premium based on the Standard & Poor's Utility Index since this index represents the return on utility stocks. The utility risk premiums range from 4.3% to 7.2%. Adding the risk premiums to the

yields on the 10-year and 30-year Treasury bonds produces a cost of equity ranging from 8.4% to 12.4%. The cost of equity determined by the risk premium analysis is consistent with the cost of equity determined by the DCF analyses.

### 4 Q Can or should the fairly wide ranges in the estimated cost of equity be narrowed?

If the estimates of cost of equity are to be useful for making decisions, I believe that the ranges should be narrowed as much as possible. Unfortunately, narrowing the range of estimates becomes largely subjective, and depends on the analyst's interpretation of the impact of many factors on the cost of capital. The following table shows the average return-on-equity ranges produced by the DCF, CAPM, and Risk Premium analyses:

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Method	Average Return-On-Equity (%)
Annual DCF Model	
Dividend Growth	7.75 -8.32
Earnings Growth	10.56 -11.83
Quarterly DCF Model	
Dividend Growth	8.41 – 9.01
Earnings Growth	10.72 – 12.65
Capital Asset Pricing Model	8.06 – 10.61
Risk Premium	8.4 -12.4

The DCF estimates based on dividend growth provide very little premium above a Treasury Bond, except for the high end of the range. The DCF estimated return-on-equity based on earnings growth begins at the upper end of the CAPM. I attribute the higher return-on-equity estimates of the DCF analyses to the current uncertainty in the electric market. Investors have driven stock prices to low levels resulting in rising dividend yields. However, analysts are projecting fairly strong earnings growth over the next five years at the same time investors are driving down stock prices. This combination of high dividend yields and fairly strong projected growth results in high DCF estimates. Return-on-equity estimates based on the Risk Premium analysis encompass virtually the entire range of return-on-equity estimates derived from the other models.

Given the present turmoil in all energy markets, I would expect investors to require somewhat higher returns than they may have required in less turbulent times. It would not be unreasonable for an investor to set the upper limits of the CAPM expected returns as a lower limit. The DCF expected returns based on earnings growth would be an upper limit to attract investment. Thus, a return-on-equity in the range of approximately 10.60% to 12.60% would be sufficient to attract investment into the electricity industry. Because the upper limit is based on the most liberal quarterly DCF model, this upper limit is probably overstated. An upper limit of approximately 12.25%, which is the near the average of the upper limits derived from the annual and quarterly DCF models, is more appropriate.

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Although an investor may find a return-on-equity range of 10.60% to 12.25% sufficient to attract investment, the range is too wide for rate-setting purposes. Stock analysts have been downgrading utility stocks just as bond rating agencies have been downgrading utility bonds. Since August 20, 2002, three of four stock analysts who follow SCANA Corporation have given SCANA Corporation stock a "hold" rating while only one analyst gave a "buy" rating. Legg Mason, Value Line, and Morgan Stanley have "hold" ratings while Merrill Lynch has a "buy" rating. In the current environment, I would expect investors to expect a return-on-equity in the upper end on my estimated range. Thus, a return-on-equity in the range of 11.25% to 12.25% would be reasonable. For ratemaking purposes, I would recommend a range of 11.75% to 12.25%.

### Should an adjustment be made for the flotation costs of issuing common stock?

It is the policy of this Commission to consider a flotation cost adjustment if a public issuance of common stock has occurred in the recent past or is expected to occur within the next two to three years. SCANA Corporation sold 6,000,000 shares of common stock to the public on October 16, 2002 at a price of \$25.10 per share. Net proceeds to SCANA Corporation from this sale were \$145,705,800 or 97% of gross proceeds. Thus, a flotation cost adjustment for the issuance of common stock is appropriate. A flotation adjustment of 20 basis points or 0.20%, as shown in Exhibit (JES-11) is appropriate. When the flotation adjustment is included, the recommended return-on-equity range becomes 11.95% to 12.45%.

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### Q What is the appropriate capital structure for South Carolina Electric & Gas Company?

The capital structure of the proxy group is shown in Exhibit (JES-12). As of December 31, 2001, the average capital structure of the proxy companies consisted of 55.9% long-term debt, 3.0% preferred stock, and 41.1% common equity. On December 31, 2001, SCANA Corporation had a capital structure comprised of 55.9% long-term debt, 2.3% preferred stock, and 43.8% common equity. SCE&G's capital structure on December 31, 2001, consisted of 42.9% longterm debt, 4.9% preferred stock, and 52.2% common equity. Value Line projects the capital structures to become less leveraged over the next five years. The average capital structure of the proxy companies in 2005-2007 is projected to consist of 50.1% long-term debt, 2.5% preferred stock, and 47.4% common equity. Value Line projects the SCANA Corporation capital structure to be 42.0% long-term debt, 2.0% preferred stock, and 56.0% common equity by the period 2005-2007. It should be noted that in response to a Staff data request, the Company projected the SCANA Corporation capital structure to average 52.9% long-term debt, 4.0% preferred stock, and 43.1% common equity over the period 2002-2005. The capital structure for SCE&G over this same period is projected to average 43.4% long-term debt, 5.8% preferred stock, and 50.8% common equity.

I generally recommend using the most recent capital structure that the Audit Department can verify. The most recent verified capital structure for SCE&G is the capital structure as of September 30, 2002. Since all of the proceeds from the

1		October 16, 2002, issuance of SCANA Corporation common stock went to
2		SCE&G, the September 30, 2002, capital structure was adjusted to reflect this
3		increase in the equity component. The resulting capital structure for SCE&G is
4		43.41% long-term debt, 4.41% preferred stock, and 52.18% common equity. This is
5		the capital structure that I recommend for ratemaking purposes.
6	Q	What is the appropriate cost of capital (return-on-ratebase) for South
7		Carolina Electric & Gas Company?
8	A	As shown in Exhibit (JES-13), the cost of capital (return on ratebase) for
9		SCE&G ranges from 9.67% to 9.94%. The embedded cost of long-term debt is
10		7.23%, the embedded cost of preferred stock is 6.81%, and the cost of equity is
11		11.95% to 12.45%. Multiplying the component cost by its corresponding capital
12		component percentage produces the total cost of capital (return on ratebase).
13	Q	Does this conclude your testimony?
14	A	Yes.

### South Carolina Electric & Gas Company Docket No. 2002-223-E

Exhibits of James E. Spearman, Ph.D. Research Department

Public Service Commission of South Carolina

## ELECTRIC UTILITY COMPANIES 2001 FINANCIAL DATA

Duke Energy Progress Energy SCANA SCE&G	COMPANY  CH Energy CINergy Corp. Consolidated Edison Constellation Energy DPL, Inc. DTE Energy Energy East Exelon Corp. FirstEnergy IDACorp Northeast Utilities NSTAR OGE Energy PP&L Resources Pepco Holdings, Inc. TECO Energy Xcel Energy	
15.4 11.4 10.0 13.0	Shareholder Equity (%) 9.8 13.5 11.8 9.1 27.0 7.2 12.9 16.6 9.2 13.3 8.3 13.7 9.7 20.8 11.0 15.4 12.6 <b>13.1</b>	Return on
59,503.0 8,461.5 3,451.0 1,716.2	Revenue (\$ Millions) 728.4 12,923.0 9,634.0 3,928.3 1,199.6 7,849.0 3,759.8 15,140.0 7,999.4 5,648.0 6,873.8 3,191.8 3,191.8 3,192.4 5,725.0 7,966.5 2,648.6 15,028.0 6,672.1	
1994.0 695.1 231.0 221.9	Net Income (\$ Millions) 54.1 446.8 695.8 366.3 221.5 329.0 235.4 1,465.0 727.0 130.0 130.0 130.6 576.0 368.0 303.7 784.7 421.7	
2.56 3.43 2.15 2.12	Earnings Per Share (\$) 3.11 2.75 3.21 2.20 1.74 2.14 2.00 4.39 2.84 3.35 1.37 3.27 1.29 3.57 2.17 2.17 2.24 2.24 2.58	•
1.10 2.14 1.20 1.48	Dividends Per Share (\$) 2.16 1.80 2.20 0.48 0.94 2.06 0.92 1.82 1.50 1.86 0.45 2.08 1.33 1.06 1.31 1.37 1.50 <b>1.46</b>	
42.97 62.39 55.81 69.81	Payout Ratio (%) 69.45 65.45 68.54 21.82 54.02 96.26 46.00 41.46 52.82 55.52 32.85 63.61 103.10 58.45 57.87 59.91 60.40	Dividend
23.0 10.6 3.0	Market Capitalization (\$ Billions) 0.8 5.2 8.8 4.7 1.9 6.7 3.0 16.4 8.9 1.0 2.3 2.3 5.4 3.5 3.0 3.0 4.6	

Sources: Value Line Investment Survey, September 6,2002; October 4, 2002; August 16, 2002. Company responses to Staff data request.

## ELECTRIC UTILITY COMPANIES FINANCIAL RATINGS

SCE&G	SCANA	Progress Energy	Duke Energy	Xcel Energy	TECO Energy	Pepco Holdings, Inc.	PP&L Corp.	OGE Energy	NSTAR	Northeast Utilities	IDACorp	FirstEnergy	Exelon Corp.	Energy East	DTE Energy	DPL, Inc.	Constellation Energy	Consolidated Edison	CINergy Corp.	CH Energy	Company	
	B+	P	A	B+	Α-	B	A-	В	В	B+	A-	NR.	B+	B+	A-	A-	₽+	A-	B+	Ą	Stock Rating	S&P
Α-	Ą	BBB	A+	BBB-	Ą	Ą	A-	Ą	A	BBB	A	NR	BBB+	P	BBB	BBB+	BBB+	A+	BBB	NR	Bond Rating	S&P
	Α	B++	>	В	A+	B++	₿+	B++	D	B+	Þ	B+	Þ	B++	B+	B+	Þ	A++	Þ	A+	Financial Strength	Value Line V
	2	2	2	4	_	2	ω	2	_	ယ	2	ω	2	2	ω	2	2	_	2	_	Safety	Value Line
	ω	NR	4	NR	ω	NR	4	4	4	ω	បា	ယ	2	4	ω	4	ω	ω	ω	ω	Timeliness	Value Line

## ELECTRIC UTILITY COMPANIES DIVIDEND YIELDS

	July-Sep.2002			July-Sep.2002	Oct. XX, 2002
	End-of-Month	Oct.22, 2002	Oct. 22, 2002	Average Price	Market Price
	Average Price	Market Price	Dividend	Dividend Yield	Dividend Yield
Company	(\$)	(\$)	(\$)	(%)	(%)
CH Energy	48.31	49.06	2.16	4.47	4.40
CINergy Corp.	33.24	30.38	1.80	5.42	5.92
Consolidated Edison	41.25	42.97	2.22	5.38	5.17
Constellation Energy	26.89	23.50	0.96	3.57	4.09
DPL, Inc.	17.87	14.98	0.94	5.26	6.28
DTE Energy	41.52	41.92	2.06	4.96	4.91
Energy East	21.88	20.50	0.96	4.39	4.68
Exelon Corp.	47.79	47.71	1.76	3.68	3.69
FirstEnergy	31.21	29.03	1.50	4.81	5.17
IDACorp	25.57	24.98	1.86	7.27	7.45
Northeast Utilities	17.02	15.01	0.55	3.23	3.66
NSTAR	41.65	39.75	2.12	5.09	5.33
OGE Energy	18.69	14.77	1.33	7.12	9.00
PP&L Corp	33.98	31.00	1.44	4.24	4.65
Pepco Holdings	20.49	19.62	1.00	4.88	5.10
TECO Energy	19.58	12.96	1.42	7.25	10.96
Xcel Energy	8.64	10.50	0.19	2.20	1.81
Average	29.15	27.57	1.43	4.90	5.43
Duke Energy	23.96	19.65	1.10	4.59	5.60
Progress Energy	44.71	39.73	2.18	4.88	5.49
SCANA	27.88	27.72	1.30	4.66	4.69

Source: The Wall Street Journal

### **ELECTRIC UTILITY COMPANIES** PROJECTED GROWTH RATES

5-Year Projected Dividend Growth 5-Year Projected Earnings Growth

				Standard
Company	Value Line	Value Line	Quicken(Zacks)	& Poor's
CH Energy	0.5	1.5	5.0	NA
CINergy Corp.	1.0	4.5	5.1	6
Consolidated Edison	1.0	2.0	3.6	4
Constallation	1.0	9.5	6.2	9
DPL, Inc.	0.5	6.5	7.0	8
DTE Energy	0.5	7.5	6.4	7
Energy East	4.0	2.0	6.0	7
Exelon Corp.	2.0	8.5	5.9	NA
FirstEnergy	3.0	9.0	7.0	NA
IdaCorp	0.0	-5.5	7.0	8
Northeast Utilities	16.5	NA	4.5	6
NSTAR	3.0	4.5	6.7	6
OGE Energy	0.0	2.5	3.3	4
PPL Corp.	8.5	6.5	5.8	7
Pepco Holdings, Inc.(1)	NA	NA	4.0	5 7
TECO Energy	3.0	4.5	5.3	
Xcel Energy	-12.0	-5.5	4.8	7
Simple Average	2.0	3.9	5.5	6.5
Above Zero Average	3.4	5.3		
Duke Energy	0.0	7.5	7.2	11
Progress Energy	NA	NA	6.2	7
SCANA	4.5	8.0	4.7	5

Sources: Value Line Investment Survey, Sep. 6, 2002, Oct. 4, 2002, August 16, 2002. Zacks growth forecasts dated October 19, 2002 as reported by Quicken Investments. Standard & Poor's Earnings Guide, September 2002.

ELECTRIC UTILITY COMPANIES ANNUAL DISCOUNTED CASH FLOW MODEL RETURN-ON-EQUITY

Company CH Energy	July-Sep. 2002 Dividend Yield 4.47	Oct. 22, 2002 Dividend Yield 4.40	Value Line DPS Growth	May-July 2002 Annual DCF Model ROE 4.99	Oct. 22, 2002 Annual DCF Model ROE 4.92 6.98
Consolidated Edison Constellation Energy	5.38 3.57	5.17 4.09	1.0 1.0	6.43 4.61	6.22 5.13
DPL, Inc.	5.26	6.28	0.5	5.79	6.81
DTE Energy	4.96	4.91	0.5	5.48	5.43
Energy East	4.39	4.68	4.0	8.57	8.87
Exelon Corp.	3.68	3.69	2.0	5.75	5.76
FirstEnergy	4.81	5.17	3.0	7.95	8.33
Northeast Utilities	3.23	3.66	16.5	20.26	20.76
NSTAR	5.09	5.33	3.0	8.24	8.49
PP&L Resources	4.24	4.65	8.5	13.10	13.55
Pepco Holdings, Inc.	4.88	5.10	NA	NA	NA
TECO Energy	7.25	10.96	3.0	10.47	14.29
Average	4.76	5.29	3.4	8.32	8.89
Duke Energy Progress Energy	4.59 4.88	5.60 5.49	0.0 NA	4.59 NA	5.60 NA
SCANA	4.66	4.69	4.5	9.37	9.40

ELECTRIC UTILITY COMPANIES
ANNUAL DISCOUNTED CASH FLOW MODEL RETURN-ON-EQUITY

				May-July 2002	Oct. 22, 2002
	July-Sep. 2002	Oct. 22, 2002	Value Line	Annual DCF	Annual DCF
Company	Dividend Yield	Dividend Yield	<b>EPS</b> Growth	Model ROE	Model ROE
CH Energy	4.47	4.40	1.5	6.04	5.97
CINergy Corp.	5.42	5.92	4.5	10.16	10.69
Consolidated Edison	5.38	5.17	2.0	7.49	7.27
Constellation Energy	3.57	4.09	9.5	13.41	13.98
DPL, Inc.	5.26	6.28	6.5	12.10	13.19
DTE Energy	4.96	4.91	7.5	12.83	12.78
Energy East	4.39	4.68	2.0	6.48	6.77
Exelon Corp.	3.68	3.69	8.5	12.49	12.50
FirstEnergy	4.81	5.17	9.0	14.24	14.64
Northeast Utilities	3.23	3.66	NA	NA	NA
NSTAR	5.09	5.33	4.5	9.82	10.07
OGE Energy	7.12	9.00	2.5	9.80	11.73
PP&L Resources	4.24	4.65	6.5	11.02	11.45
Pepco Holdings, Inc.	4.88	5.10	NA	NA	NA
TECO Energy	7.25	10.96	4.5	12.08	15.95
Average	4.92	5.53	5.3	10.61	11.31
Duke Energy	4.59	5.60	7.5	12.43	13.52
Progress Energy	4.88	5.49	NA	NA	NA
SCANA	4.66	4.69	8.0	13.03	13.07

# ELECTRIC UTILITY COMPANIES ANNUAL DISCOUNTED CASH FLOW MODEL RETURN-ON-EQUITY

# ELECTRIC UTILITY COMPANIES ANNUAL DISCOUNTED CASH FLOW MODEL RETURN-ON-EQUITY

	July-Sep. 2002	Oct. 22, 2002	Standard&Poor's	July-Sep. 2002 Annual DCF	Oct. 22, 2002 Annual DCF
Company	Dividend Yield	Dividend Yield	EPS Growth	Model ROE	Model ROE
CH Energy	4.47	4.40	NA	NA	NA
CINergy Corp.	5.42	5.92	6	11.75	12.28
Consolidated Edison	5.38	5.17	4	9.60	9.38
Constellation Energy	3.57	4.09	9	12.89	13.46
DPL, Inc.	5.26	6.28	8	13.68	14.78
DTE Energy	4.96	4.91	7	12.31	12.25
Energy East	4.39	4.68	7	11.70	12.01
Exelon Corp.	3.68	3.69	NA	NA	NA
FirstEnergy	4.81	5.17	NA	NA	NA
IdaCorp	7.27	7.45	œ	15.85	16.05
Northeast Utilities	3.23	3.66	6	9.42	9.88
NSTAR	5.09	5.33	6	11.40	11.65
OGE Energy	7.12	9.00	4	11.40	13.36
PP&L Resources	4.24	4.65	7	11.54	11.98
Pepco Holdings, Inc.	4.88	5.10	5	10.12	10.36
TECO Energy	7.25	10.96	7	14.76	18.73
Xcel Energy	2.20	1.81	7	9.35	8.94
Simple Average	4.90	5.43	6.50	11.84	12.51
Duke Energy	4.59	5.60		16.09	17.22
Progress Energy	4.88	5.49	7	12.22	12.87
SCANA	4.66	4.69	Oī	9.89	9.92

ELECTRIC UTILITY COMPANIES

QUARTERLY DISCOUNTED CASH FLOW MODEL RETURN-ON-EQUITY

Company	Dividend Per Share Growth	Value Line	Earnings Per Share Growth	Standard & Poor's
CH Energy	5.07	6.11	9.77	NA
CINergy Corp.	6.58	10.27	10.91	11.86
Consolidated Edison	6.55	7.60	9.29	9.71
Constellation Energy	4.65	13.46	10.04	12.94
DPL, Inc.	5.89	12.21	12.74	13.79
DTE Energy	5.58	12.93	11.78	12.41
Energy East	8.64	6.55	10.73	11.77
Exelon Corp.	5.81	12.55	9.85	NA
FirstEnergy	8.04	14.33	12.24	NA
IdaCorp	NA	NA	15.00	16.07
Northeast Utilities	20.31	NA	7.92	9.47
NSTAR	8.34	9.92	12.24	11.50
OGE Energy	NA	9.99	10.85	11.60
PP&L Resources	13.17	11.09	10.36	11.61
Pepco Holdings, Inc.	NA	NA	9.17	10.22
TECO Energy	10.68	12.29	13.15	14.97
Xcel Energy	NA	NA	7.12	9.37
Average	8.41	10.72	10.77	11.95
Duke Energy	4.59	12.52	12.21	16.18
Progress Energy	NA	NA	11.47	12.31
SCANA	9.46	13.12	9.67	9.98

Note: market price = average July-September end-of-month closing price

ELECTRIC UTILITY COMPANIES
QUARTERLY DISCOUNTED CASH FLOW MODEL RETURN-ON-EQUITY

	Dividend Per Share Growth		Earnings Per Share Growth	wth
Company	Value Line	Value Line	Quicken (Zacks)	Standard & Poor's
CH Energy	5.00	6.04	9.70	NA
CINergy Corp.	7.12	10.83	11.47	12.42
Consolidated Edison	6.32	7.37	9.06	9.48
Constellation Energy	5.19	14.04	10.61	13.52
DPL, Inc.	6.96	13.34	13.87	14.94
DTE Energy	5.53	12.88	11.73	12.36
Energy East	8.96	6.86	11.05	12.10
Exelon Corp.	5.82	12.56	9.86	NA
FirstEnergy	8.43	14.74	12.64	NA
IdaCorp	NA	NA	15.19	16.27
Northeast Utilities	20.83	NA	8.38	9.94
NSTAR	8.60	10.19	12.51	11.77
OGE Energy	NA	12.05	12.92	13.69
PP&L Resources	13.63	11.53	10.80	12.06
Pepco Holdings, Inc.	NA	NA	9.40	10.45
TECO Energy	14.76	16.43	17.32	19.21
Xcel Energy	NA	NA	6.71	8.95
Average	9.01	11.45	11.37	12.65
Duke Energy	5.60	13.65	13.33	17.35
Progress Energy	NA	NA	12.15	12.99
SCANA	9.49	13.15	9.70	10.01

Note: market price = October 22, 2002 closing price

### ELECTRIC UTILITY COMPANIES BETAS

Company	Value Line Beta
Company	0.65
CH Energy	0.65
CINergy Corp. Consolidated Edison	0.55
Constellation Energy	0.70
DPL, Inc.	0.75
DTE Energy	0.60
Energy East	0.65
Exelon	0.55
FirstEnergy	0.55
IDACorp	0.55
Northeast Utilities	0.60
NSTAR	0.60
OGE Energy	0.55
PPL Corp.	0.75
Pepco Holdings, Inc.	NA
TECO Energy	0.55
Xcel Energy	NA
Average	0.62
Duke Energy	0.70
Progress Energy	NA
SCANA	0.55

Source: Value Line Investment Survey, Sep. 6, 2002, Oct. 4, 2002, Aug. 16, 2002.

### U.S. TREASURY BOND YIELDS

Term	Security	July-Sep. 2002 End-of-Month Average Yield	October 22, 2002 Yield
10-Year	Treasury Bond	4.064%	4.261%
30-Year	Treasury Bond	4.970%	5.162%

Source: The Wall Street Journal.

# ELECTRIC UTILITY COMPANIES CAPITAL ASSET PRICING MODEL RETURN-ON-EQUITY

SCANA	Progress Energy	Duke energy	Average	Xcel Energy	Pepco Holdings, Inc.	PP&L Resources	OGE Energy	NSTAR	Northeast Utilities	IDACorp	FirstEnergy	Exelon Corp.	Energy East	DTE Energy	DPL, Inc.	Constellation Energy	Consolidated Edison	CINergy Corp.	CH Energy	Company			
0.55	NA	0.70	0.62	0.55 NA	NA	0.75	0.55	0.60	0.60	0.55	0.55	0.55	0.65	0.60	0.75	0.70	0.55	0.65	0.65	(B)	Beta	Value Line	
10.50	10.50	10.50	10.50	10.50	10.50	10.50	10.50	10.50	10.50	10.50	10.50	10.50	10.50	10.50	10.50	10.50	10.50	10.50	10.50	(Rm)	Return	Rate of	Market
4.064	4.064	4.064	4.064	4.064	4.064	4.064	4.064	4.064	4.064	4.064	4.064	4.064	4.064	4.064	4.064	4.064	4.064	4.064	4.064	(Rf)	Return	Rate of	Risk-free
7.60	NA	8.57	8.06	7.60 NA	NA	8.89	7.60	7.93	7.93	7.60	7.60	NA	8.25	7.93	8.89	8.57	7.60	8.25	8.25	(%)	Equity	Return on	Epected

# ELECTRIC UTILITY COMPANIES CAPITAL ASSET PRICING MODEL RETURN-ON-EQUITY

SCANA	Progress Energy	Duke energy		Xcel Energy	Pepco Holdings, Inc.	PP&L Resources	OGE Energy	NSTAR	Northeast Utilities	IDACorp	FirstEnergy	Exelon Corp.	Energy East	DTE Energy	DPL, Inc.	Constellation Energy	Consolidated Edison	CINergy Corp.	CH Energy	Company				
	nergy	У	Average	gy	ings, Inc.	urces	У		Itilities			9.				n Energy	d Edison	rp.						
0.55	NA	0.70	0.62	0.55 NA	NA	0.75	0.55	0.60	0.60	0.55	0.55	0.55	0.65	0.60	0.75	0.70	0.55	0.65	0.65	(B)	Beta	Value Line		
14.00	14.00	14.00	14.00	14.00	14.00	14.00	14.00	14.00	14.00	14.00	14.00	14.00	14.00	14.00	14.00	14.00	14.00	14.00	14.00	(Rm)	Return	Rate of	Market	
5.162	5.162	5.162	5.162	5.162 5.162	5.162	5.162	5.162	5.162	5.162	5.162	5.162	5.162	5.162	5.162	5.162	5.162	5.162	5.162	5.162	(Rf)	Return	Rate of	Risk-free	
10.02	NA	11.35	10.61	10.02 NA	NA	11.79	10.02	10.46	10.46	10.02	10.02	10.02	10.91	10.46	11.79	11.35	10.02	10.91	10.91	(%)	Equity	Return on	Epected	

### **EQUITY RISK PREMIUM**

	Equity risk premium 11.5%	eta) 0.62 Utility
5.7% government by		
	11.6%	11.6% Equity eta) 0.62 Utility

Sources: Ibbotson Associates; Stocks, Bonds, Bills, and Inflation, 2002 Yearbook. Standars & Poor's Statistical Service.

### STOCK ISSUANCE COST ADJUSTMENT

### A. Stock issuance adjustment return equation:

$$R_i = (D_1/P_0)[1/(1-F)] + G$$

Where: Ri = adjusted return on equity

 $D_1$  = expected dividend =  $D_0(1+G)$ 

 $P_0 = \text{market price}$ 

F = flotation expense (expressed in decimal form)

G = dividend growth (expressed in decimal form)

$$Ri = [1.30(1+0.034)][1/(1-0.03) + 0.034 = 8.74\%$$

Where:  $D_0 = SCANA$  dividend on October 22, 2002 = \$1.30

 $P_0$  = selling price of stock issuance on October 16, 2002 = \$25.10

F = cost of SCANA's common stock issuance on October 16, 2002 = 3%

G = average projected SCANA dividend growth = 3.4%

### B. Unadjusted return:

$$R = (D_1/P_0) + G$$

Where: R = return on equity with no issuance adjustment

 $D_1$  = expected dividend =  $D_0$  (1+G)

 $P_0 = \text{market price}$ 

G = dividend growth (expressed in decimal form)

$$R = [1.30(1.034)/27.62] + 0.034 = 8.27\%$$

Where:  $D_0 = SCANA$  dividend on October 22, 2002 = \$1.30

 $P_0$  = market price on October 9, 2002 (one week prior to sale) = \$27.62

G = average projected SCANA dividend growth = 3.4%

### C. Cost of externally raised equity:

$$8.74\% - 8.27\% = 0.47\%$$

### D. Stock issuance adjustment:

0.54% x (percent of equity in SCE&G's projected capital structure)

$$0.47\% \times 0.431 = 0.20\%$$

## ELECTRIC UTILITY COMPANIES CAPITAL STRUCTURE

		Actual 12/31/01		T	roiected 2005-2007	
	Long-term	Preferred	Common	Long-term	Preferred	Common
Company	debt	stock	equity		stock	equity
	(%)	(%)	(%)	(%)	(%)	(%)
CH Energy	28.1	7.3	64.6		4.0	57.5
CINergy Corp.	52.1	5.3	42.6		5.0	51.0
Consolidated Edison	48.2	2.2	49.6		1.5	53.5
Constellation Energy	40.2	2.8	57.0		2.0	52.5
DPL, Inc.	74.8	0.8	24.4		0.0	30.0
DTE Energy	63.3	0.0	36.7		0.0	52.5
Energy East	60.7	0.9	38.4		1.5	42.5
Exelon Corp.	59.3	2.8	37.9		2.0	47.5
FirstEnergy	60.1	2.7	37.2	45.5	1.5	53.0
IdaCorp	46.4	5.7	47.9		5.0	50.5
Northeast Utilities	65.9	1.7	32.4		2.0	42.0
NSTAR	59.2	1.3	39.5		1.5	47.0
OGE Energy	59.5	0.0	40.5		0.0	46.0
PP&L Resources	64.8	11.5	23.7		7.0	41.0
Pepco Holdings, Inc.	53.1	5.9	41.0		5.5	48.5
TECO Energy	48.3	0.0	51.7		3.0	54.0
Xcel Energy	66.7	0.5	32.8		0.5 37.5	37.5
Average	55.9	3.0	41.1	50.1	2.5	47.4
Duke Energy	51.5	0.9	47.6	48.0	1.0	51.0
Progress Energy	60.9	0.6	38.5	54.5	0.5	45.0
SCANA	53.9	2.3	43.8	42.0	2.0	56.0
SCE&G	42.9	4.9	52.2	43.4	5.8	50.8

Sources: Value Line Investment Survey, September 6, 2002; October 4, 2002; August 16, 2002. Company response to Staff data request.

### COST OF CAPITAL

	CommonEquity	Preferred Stock	Long-term Debt		Common Equity	Preferred Stock	Long-term Debt	Capital Component
	52.18	4.41	43.41		52.18	4.41	43.41	Capital Ratio (%)
	12.45	6.81	7.23		11.95	6.81	7.23	Component Cost (%)
9.94	6.50	0.30	3.14	9.67	6.24	0.30	3.14	Cost of Capital (%)

### COST OF CAPITAL

	CommonEquity	Preferred Stock	Long-term Debt		Common Equity	Preferred Stock	Long-term Debt	Capital Component	
	52.18	4.41	43.41		52.18	4.41	43.41	Capital Ratio (%)	
	12.5	6.81	7.23		12.0	6.81	7.23	Component Cost (%)	
9.96	6.52	0.30	3.14	9.70	6.26	0.30	3.14	Cost of Capital (%)	